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SOME
OBSERVATIONS
ON THE
SEVERAL METHODS
OF
LITHOTOMY.

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OF
LITHOTOMY.

In a LETTER to
Dr. JOHN LANE.

By SAMUEL PYE, Surgeon in *Bristol*.

ἡ Ἐμπειρία τέχνην ἐποίησε, ἀπειρία δ' ἤ τύχην. FIENUS.



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OBSERVATIONS

ON THE

GENERAL METHODS

OF

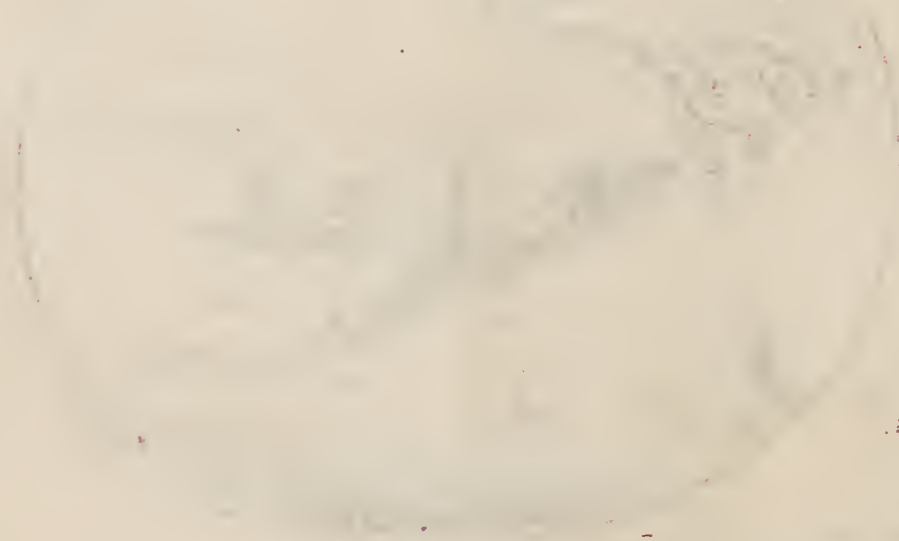
LITHOTOMY.

IN THE

DEVELOPMENT

OF THE

OF THE



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T O H I S

Much Esteemed and Honoured F R I E N D,

Dr. J O H N L A N E.

S I R,



THE Honour you have frequently done me, by your Presence in my Operations, and the Courage I took from the Countenance of so good a Judge, require of me the most publick Acknowledgment, especially considering the Recovery of several I have Cut, is to be attributed to your Advice and Consummate Judgment. In the last, as there happen'd something worthy your Notice, so it led you to ask me, what I had particularly remark'd in the several Methods of Lithotomy, and which had the Preference?

B

And

And since the Reputation the Art of Chirurgery bears in these Parts, is greatly owing to the generous Encouragements you have given to the Professors of it; Therefore give me leave, to offer these Observations to your Perusal, and my Request is, that you'll accept of them as a Testimony of that grateful Sense I have of your Friendship in general to the Profession, and in particular to

Your most obliged Servant,

Samuel Pye.



SOME



SOME
OBSERVATIONS
ON THE
SEVERAL METHODS
OF
LITHOTOMY.



As the Miseries Mankind endure under the Affliction of the Stone, draw from us the highest Compassion; so we cannot sufficiently express our Gratitude to the Memories of those great Men, who, with unwearied Industry in the several Branches of our Profession, have found out a Possibility of Relief in this deplorable Disease, by an Operation, no less noble and surprising in its Discovery, than wonderful in its Effect.

To describe the several Methods, handed down to us, wou'd be needless and vain in me, since they are so fully set forth in *Celsus*, *Guido*, *Rossetus*, *Fienus*, *Hildanus*, &c. Nor shall I presume to determine which has the Preference.

But as the present Times seem to run into a general Approbation of the Method describ'd by *Rossetus*, tho' first brought into Practice here by Mr. *John Douglas*; and since farther establish'd by the successful Operations of Mr. *Chefelden*, Mr. *Dobyns*, Mr. *Bamber*, &c. I like the Liberty to offer some Remarks, that have occur'd to me, in the different Ways of Cutting.

I wou'd not be thought to cast any invidious Reflection on this new Method, or to endeavour to draw it into the least Discredit; the bringing it into Practice, certainly deserves the greatest Acknowledgment.

My View is, to obviate the Aspersions of some unthinking Persons, who depreciate, and cry down all the other Methods, as in no wise now to be followed; and to shew, that in several Instances wherein I have been concern'd, there have happen'd many Circumstances, that have given every Operation its advantagious Turn.

Particular Histories faithfully related, wou'd be of the greatest use; but such is the Disingenuity of some in these Times, they conceal their Miscarriages, and with the Success of Two or Three lucky Cures, are carried to such a pitch of Vanity, that they attempt, at all Hazards, what a prudent Man wou'd avoid.

And as this Operation at the best, is too uncertain, and the only Aim of the Surgeon ought to be the Relief and Safety of the Afflicted, so it highly behoves him to examine well the Symptoms of the Patient, before he applies the Knife; nor shou'd he ever presume to do it, without the favour of a good ^a Prognostic.

^a Non igitur sine delectu corporis, peculiaris Naturæ Temperiei, Sectio est molienda. *Ind. Duret. Annot. in cap. de urina ardore Hollerii.*

And as the Structure of the Parts, under the Influence of any Disease, where Manual Operation is required, is absolutely necessary to be examin'd into, and thoroughly known; so nothing can lead us into that but Anatomical Disquisitions: To^a these we owe the Principles of our Art, and by these we are directed in our Practice.

To what an unjustifiable Hazard shou'd we expose the Lives of Persons entrusted to our Care, if we make our Incisions in that rash manner (to say no worse which they must be, when the Surgeon has not taken care to lay that Foundation for his Practice.

I wish there were not too many Instances, where Fate has followed too close upon the Knife, to confirm this Censure; in such sudden Catastrophes there is too much reason to suspect an Errour, both in Judgment and Performance.

But be it from what Cause soever, 'tis a necessary Duty, that the History of such Cases be candidly imparted, to prevent others from falling into the like Mistake: This, in some Measure, wou'd atone for the Rashness, and probably lay a better Foundation for a future Practice.

A serious Reflection on such Misfortunes, wou'd give a Check to the rash Advances of unexperienc'd Persons, improve their Judgments, and convince them, that Four or Five accidental Cures, are not sufficient to set aside wholly a Practice so long approved of, and establish'd on the most confirm'd Experience.

For my own part I shall make no scruple to relate the various Successes of those who have been under my Care,

^a Hippocrates l. de arte. ὃ δ' ἡ μὲν ἀρχὴ πρὸς τὸ ὀρθλῶσαι, ἐξαρκέσει καὶ πρὸς τὸ ἰαθῆναι.

with the utmost Candour and Fidelity; and what encourages me in this is, the noble Example I have before me of the Divine old Man; He never conceal'd his ἀπεθάρτεν; and it was from such faithful Observations, he form'd those standing Axioms he has left us.

Did we weigh the Reasons he had for those Judgments he has made in this Distemper, we shou'd soon find, that we ought not to attempt such Operations, but upon the most mature Thought.

The Solemnity of his Oath in this Particular shews, that he had the most tender Concern for the Good of Mankind, when he enjoin'd ^a it on his Pupils; least an over Fondness of being an Operator, should tempt any of them to trifle with Life.

In his ^b *Prænotiones* he tells us, how fatal some Diseases of the Bladder are; from whence we may justly infer Wounds in such distemper'd Cases, must inevitably draw on a speedy Death.

Celsus has his Cautions too, and — *Desperatos minime attingendos esse*, is his Charge. *Ne infamentur Remedia, quæ multis saluti fuerunt.*

Thus far I thought fit to premise, and shall now proceed to those Observations, that have fallen in my way under this Head.

The first is a Case that happen'd soon after Mr. Douglas had publish'd his Tract.

^a Jusjurand. Hip. 8. τεμέω ὃ εἰς μὲν λιθιῶντας, ἐκχωρήσω δὲ ἐργάτησιν ἀνδράσι πρήξει τῆςδε.

^b *Prænotion.* Sect. xix. 7. 8. Κύστις ὃ σκληραὶ τε καὶ ἐπώδυνοι, δεινὰ μὲν πάντεσσι καὶ ἀλγεῖται. οὐκ οὐκ αὖτε πύρετος συνεχεῖ γίνον.

A poor Man sent for me, under the most violent Torture from the Stone, a total Suppression of Urine, and a large Tumour possessing the Epigastrium: I endeavour'd to pass the Catheter, but cou'd not: a Clyster was administred, which gave him some little Ease; but his Pains return'd soon, and with so much Violence, that he expir'd that Night. The next Day he was open'd; but first, as the Tumour on the lower part of the Abdomen, was so remarkably large, and painful, I examined that, and found a Fluctuation, like Matter, under the Skin; upon making a Puncture, a large quantity of Pus mix'd with Urine followed: Then I carefully divided the Integuments, and traced the Sinus down into the Bladder, from whence I extracted a Stone, the size of a common Walnut, hard, and of a blackish Colour, but beset with various Angles, or Points, of ChrySTALLIZ'd Salts, not unlike Sparr.

The Bladder was mortified: upon examining into the Neck of it, I found the Sphincter hard and strongly contracted; but forcing my Finger through, felt another Stone at the Beginning of the Urethra: then I attempted with my Staff to push it back, but in vain, and it was with the greatest difficulty pass'd by: I cut on the Staff, and thrust it out; it was of the Bigness of a Mulberry, globular, and pointed as the other.

What is remarkable in this Case is, that had this unhappy Wretch been in such a State as to have admitted the Operation, nothing but the Minor Apparatus of the lower Way cou'd have succeeded.

Another Case worthy Observation, was of an old Gentleman, aged 75, who had some time lain ill under frequent

*few days
2 months
under
stone
of the
bladder
found
of the
stone
to be
frequent*

*made by a finger in vain did at last
this stone was of a bigness & shape of a mulberry*

frequent Suppressions of Urine, from which I as often relieved him by the Catheter. His Urine was loaded with a slimy Mucus, which now and then gave him Pain in coming off; otherwise had so little Uneasiness, that we cou'd not prevail on him to believe he had a Stone, tho' I had often assured him, that I felt one or more. At length he was perswaded to take another Surgeon's Opinion with me, who confirm'd to him the Certainty of a Stone.

We thought him too old for the Operation, and therefore proposed only a Palliative Cure, which was Cutting *Sine extractione calculi ad mentem Fieni, Cap. xiv. Tractat. de Sectione calculi.* But his great Age, and other Infirmities, back'd with his Diffidence of Success, overstay'd his Resolution, that he chose rather to submit to the Severity of his Disease, which in a little time after carried him off.

I was desired to open him, and found his Bladder free from any Inflammation or Hardness, but no less than thirty three Stones of different Sizes, from three Quarters of an Inch Diameter to a Quarter the least of them, all perfectly round, and polished as the finest Bezoar; his Kidneys were sound, and free from any Appearance of the Stone: In the *Vesica Fellea* there were thirteen large Stones.

This was all we observed remarkable in him: Had I been so happy as to have cut him, as we proposed, those Stones wou'd have followed the least Dilatation of the Sphincter, and in all probability, it wou'd have been successful.

This

The Cannula is to be introduced into the

which cannot be done but by forcing it through

which is the only way to succeed

Some Observations on Lithotomy.

13

This is Instanced to shew, the Preference the old Methods must have had here, and that to have gone Thirty Three times down into the Bladder, which must have been done in the new Way, wou'd have been very tedious and full of Hazard.

As *Fienus* upon Operations is a Book scarce, and in that Chapter abovementioned, there are many useful Remarks, I thought it not amiss, to transcribe it in the Author's own Words.



C

Seçtio,

*Sectio, sine extractione calculi, & quibus
conveniat.*

“ **V**erum quia omnis extractio Calculi est valde
 “ periculosa, præcipue in senibus, qui sunt
 “ imbecilli, propter tot contusiones, quas
 “ vesica debet pati; a digitis, catheteribus, ductoribus
 “ verticulis, everriculis, tenaculis, & uncis, unde in-
 “ flammatio sequitur. Et quia periculum est, ne, dum
 “ extrahitur, vesica dilaceretur, vel si asper sit Calculus,
 “ venæ hæmorrhoidales vel aliæ lacerentur, unde le-
 “ thalis hæmorrhagia sequeretur: Et quod maximum
 “ est periculum, ne, dum Calculus apprehenditur & ex-
 “ trahitur, una etiam Substantia vesicæ cum eo appre-
 “ hendatur & extrahatur & dilaceretur: Ideò aliqui Docti
 “ viri invenère aliam rationem Sectionis, qua Calculus
 “ non extrahitur, sed relinquitur; hæc Sectio in valde Se-
 “ nibus locum habet maximè, propterea quod illi de-
 “ biles sint; & non tam bene possint extractionem ferre:
 “ Ad hoc, quod illi jam ferè ad terminum vitæ perve-
 “ nerint, & ideò non debeant hanc molestiam, quæ
 “ ab hac Sectione remaneat, tam diu quam juvenes,
 “ tolerare. Locum etiam habet, ubi Calculus est valde
 “ magnus, adeò ut sine periculo dilacerationis vesicæ &
 “ mortis, non videatur extrahibilis. Hæc Sectio procul
 “ dubio minus est periculosa quam præcedens; nam etsi
 “ ipsum vulnus quidem sit periculosum, tamen ex magna
 “ parte non est tam periculosum, quando tantum fit
 “ vulnus

“ vulnus simplex, & nihil aliud, quam quando insuper
“ fit Calculi extractio. In hac ergo Sectione, fit vul-
“ nus, sicut supra dictum, usque ad vesicam: Sed multo
“ minus, quam antea, & Calculus non extrahitur, sed
“ relinquitur; sed curatur ut vulnus nunquam clauda-
“ tur, sed ut occallescant labia ejus, & maneat semper
“ apertum, Ut sic Urina per illud perpetuò fluere possit;
“ ideo primis diebus imponitur Tubulus argenteus fora-
“ minatus ne claudatur, quousque labris obductis, ipsum
“ per se maneat apertum. Hæc Sectio non est equidem
“ perfectum Calculi remedium, quia Calculum ipsum
“ non aufert, sed est tamen valde utilis, etenim aufert
“ aut minuit præcipua Symptomata, quæ Calculus ad-
“ ducit. Nam imprimis tollit periculum Suppressionis
“ Urinæ quod a Calculo quotidie imminet, quia sic
“ facto foramine, potest Urina per illud semper exire
“ sine periculo Suppressionis ejus. Nam si Calculus ante
“ illud foramen cadat, leniter stylo removetur & Sup-
“ pressio tollitur: Si vero alius caderet ante canalem
“ vesicæ, occluderet ipsum, sic ut urina exire non possit
“ nisi cum maximo dolore, & periculo Catheter im-
“ poneretur, et ut imponatur, sæpe Calculum non
“ potest remove. Deinde tollit illum intolerabilem
“ cruciatum, in reddendâ Urinâ, quam Calculus sem-
“ per faciebat, propterea quod tum Urina exeat per
“ vulnus, in cujus labris callosis non est ullus Sensus, &
“ sic non fit dolor, antea vero exhibat per ductum Uri-
“ narium & virgam in qua acutissimus est Sensus, &
“ ideo excitabatur immensus dolor. Tertio etiam quia
“ præcavet mortem, quæ ante certò esset secutura: Nam

“ vesicæ ulcus & inflammatio, quæ semper Calculum
 “ comitantur, possunt facilius curari injectionibus in
 “ vesicam per foramen factis, quam ante poterant: aliàs
 “ autem periculum mortis erat, sicuti etiam ab urinæ
 “ suppressione, cujus periculum, ut dixi, hac Sectione
 “ tollitur. Verum quidem est, quod Sectio cum extractione
 “ calculi esset melior, quam hæc, si esset æque facilis,
 “ sed est longe periculosior. Præstat ergo habere aliquod
 “ remedium moderatum, cum securitate, quam majus
 “ cum periculo maximo. Est etiam verum, quod hæc
 “ Sectio habeat magnum inconueniens, quod scilicet
 “ homo tota vita debeat laborare involuntario per vul-
 “ nus urinæ stillicidio; sed melius est hanc molestiam
 “ ferre, quam in periculum vitæ incidere.

To recite the Particular Cases of every one I have cured, would take up too much Time, and be of little Use; 'tis sufficient to say, that of four or five and Twenty, whom I have cut the old Way, I have had Twenty living, all cured.

But as some had the Misfortune to dye, the particular Circumstances relating to them may be of use.

One was an old Gentleman near Seventy, a weak infirm Man, almost worn out, with the Violence of his Pain; he had a very large Stone; the Operation was happy enough, but the sixth Day after, he, without any previous ill Symptome, sunk away.

Another was about Thirty Two; ^a he had a Stone so monstrously large, that it cou'd in no wise be extracted:

^a See Fig. 3.

The Incision was made, and I had fast Hold of the Stone, in less than a Minute, but cou'd not move it; Pieces broke off, as broad as a Shilling, thick as my Finger, and that was all cou'd be done; my Forcipes were all bent, and I was at last forc'd to give out. He dyed that Night, and the next Day was opened; we found the Bladder schirrous, and very thick, and so strongly contracted to the Stone, that it was with some difficulty disengaged; there were such large *Rugæ* in the Stone, form'd by the contracted Bladder, and its own Accretion, that it was impossible to be drawn forth, nor could I with all my Force, give it the least Turn, so as to loosen it.

There were Two Boys, one of which lived near half a Year; their Cases were Nephritick, and such Quantities of fabulous Matter every Day poured down from their Kidneys, that it lay in heaps on the Bolsters when I dress'd them; it hindred the Union of the Wound, that it became Fistulous, and in that State they remained, till worn out by the Disease.

There was another poor Lad, that I cut, and extracted a very large rough Stone from, who labour'd under the same ill Habit, and Misfortune, yet lived very comfortably Two or Three Years.

As I have mention'd the Misfortune of Fistula's in the Urethra from this Operation, let me offer one Remark on that Head; In Habits where such Quantities of fabulous Matter are continually pouring down, 'tis no wonder, if a Man is disappointed, in the Cure of the Wound; Yet as that may happen also in better Constitutions,

stitutions, an Observation to the purpose cannot be amiss.

The Case happen'd to a Patient of mine, a Young Gentleman, whom I happily cut and cured of a large Stone; the Quickness of the Operation, transported me so, that I neglected to examine, whether there were more Stones. After he had been cured about Three Weeks, he complain'd as bad as before the Operation: I was somewhat surpriz'd, and upon Search found another Stone.

He was a Gentleman of brave Resolution, and told me, since it was so, he knew what the Operation was, and wou'd be cut again, but I will not (says he) undergo the Formality of the Apparatus: so without any farther Preparation he brought himself to the Bed's Foot, and drew up his Knees; I introduced the Staff, and Cut by the old Cicatrix, took my Plaster-box Forceps, and carried them into the Bladder; when in, I drew out the Staff, and with my Finger in Ano, assisted my other Hand with the Forceps, so took hold of the Stone, and extracted it. I carefully search'd the Bladder, but found no more. This was above an Inch long, and thicker than a *Swan's Quill*. In the Cure afterwards, I was sorely perplexed, in spite of all my Endeavours it became callous at the Urethra; so when ever he made Water, part came through that Orifice; I tryed many Methods to no purpose; at length I thought on the ^a Actual Cautey, which in a few Days compleated the Cure; and he is at this Time perfectly Well.

^a Hippocrat. Sect. 8. Aphorism. vi. Ὅσα φάρμακα οὐκ ἵηται, αἷδιον ἵηται. ὅσα αἷδιον οὐκ ἵηται, πῶς ἵηται, ὅσα δὲ πῶρ οὐκ ἵηται, ταῦτα χρὴ νομίζειν ἀνίατα.

In September 1722. Through the Interest of Robert Gay, Esq; (to whose generous Friendship I am under the greatest Obligations,) I was introduced to the Acquaintance of Mr. Dobyns and Mr. Bamber, who both did me the Favour in a very particular Manner, to admit me to see them perform this New Way.

Soon after this, a Young Lad was put under my Care; he was about Seven Years of Age, hectic, and subject to a Cough; after the Injection, I divided the Integuments, and as cautiously as possible laid the Bladder bare, then about an Inch above the *Os Pubis*, with a sharp-pointed Knife, made a Puncture; when the Injection appeared, I immediately passed in a lenticulated Knife, and cut down to the *Os Pubis*: My Finger passed down with the Knife, then I introduced the Forceps, and soon extracted a large Stone.

Matters went on promising for Three or Four Days; then began a violent Pain in his Right Side, that Hypochondrium tense, and hard, Dyspnœa, Vomiting, &c. In the Wound some small shew of Digestion on the Edges, but a black slough in the Middle, by the side of which a large Quantity of *fœtid Sanies* discharged: he held on thus Sixteen or Seventeen Days and then dyed,

He was open'd the next Day; upon drawing the Intestines on one side, we found a large Tumour in the Duplicature of the *Peritonæum*, stretching away from the *Fundus Vesicæ* up the Ureter to the right Kidney; upon pressure, it discharg'd it self in the Wound by the Slough abovementioned.

What is remarkable in this Operation, is, that as this Abscess was external of the Urinary Passages, it led me into a serious Consideration of some Circumstances in the Operation it self, that in Cutting downward with the lenticulated Knife, tho' I was in the Bladder, before the Injection was discharg'd, yet in passing my Finger with the Knife, 'tis possible, I might by too quick a Protrusion of the Finger, make a Separation of the Bladder from the Peritonæum; the Consequence of which might be a Sinus, and from thence this Abscess between the Membranes.

Upon reflecting on this Case, I thought, that if the Incision was begun close to the *Os Pubis*, and so advanced upwards, that Accident might be avoided for the future; the Bladder, if fairly injected very much Favouring such an Incision.

The next that offer'd, was a Currier's Child of *Wootton-under-edge, Gloucestershire*, about Five Years Old, a lively brisk Boy, under frequent Suppressions of Urine; the Bladder being injected, the Skin and Muscles divided as before, I began the Incision with a pointed Knife, the back of the Knife close to the *Os Pubis*; I push'd down, till the Injection appear'd, and with the Fore Finger of my left Hand, bore on the Back of the Knife, still sliding on my Finger, as I made the Incision, till my Finger slid over the Point, by which means that being guarded, the Incision was made as far as I thought necessary, then I slid down the Forceps, and drew forth a Smooth Stone, about the Bigness of a large Nutmeg, in Shape something like a Kidney. There was no ill Accident attending

attending this Cure, and what is very extraordinary, after his first Dressing, he never made any Urine through the Wound, and was well, about the Street at play, the Thirteenth Day after the Operation.

Another was a poor Fellow of Wells in Somersetshire; whom Mr. Lucas, an experienc'd Surgeon of that Place, desired me to cut: He was 19 Years Old, and from a Child under the Affliction, miserably emaciated. Upon search I found a large Stone, his Bladder thick and hard, strongly contracted to it, a Stillicidium Urinæ constant on him, and full of fabulous Matter. I made the Injection but cou'd not force in above Two Ounces: There appear'd a small Turgescency on one side the Linea alba, just above the Os Pubis: I divided the Skin, &c. and the Turgescency appear'd (such as it was) very visible, it being that Part only of the Bladder, which was capable of Extension. I prest down the Knife, as in the last Observation, and with my Finger examin'd the Stone; the Bladder so strictly encompassed it, that I cou'd not propose to take hold of it, till dislodged from its Strictures, which with some difficulty was done, and then extracted. It was a large soft fabulous Stone, very porous and rough, the Coats of the Bladder ulcerated and very fungous. Mr. Lucas took the utmost Care of him, the Sloughs separated, but the Discharge of Matter was so much, and the Bladder so extraordinarily affected, that after near a Month's Bearing up under all these Difficulties, he dyed. Upon opening him, he found the Neck of the Bladder, and where the Stone was lodged, very schirrous, and full of deep Ulcers.

The last was a poor Lad of *Glocester*, recommended to my Care by the Charity of some Gentlemen there: He was about Nine Years of Age, much emaciated, a fixt Pain in his right Kidney, a *Stillicidium Urinæ*. Upon Searching him, I found a large Stone, pressing down very low in *Perinæo*. I shou'd have chose Cutting him the old Way, but the Mother had been prejudiced against it, by some sinister Insinuations; the Particulars of which, as they are foreign to my Purpose, I shall pass by with that Contempt and Disregard such Usage deserves. I made the Incision as before, and got into the Bladder to my Wish, took hold of the Stone instantly, but to my Surprise cou'd not draw it forth; bending the Forceps a little backward, to loosen the Stone, it broke and the Piece in the Forceps was brought forth; it broke off in the Middle, just under the *Os Pubis*, the remaining and biggest Part lay in *Pernæo*, the Neck of the Bladder strongly contracted round it: (the Shape of the Stone, as in the Figure annex'd, will best account for the Accident.) I then introduced my Finger again, and with the Forefinger of my other Hand in *Ano*, got up the other Piece into the Bladder, and then extracted it.

I had all the promising Hopes of Cure for Sixteen or Eighteen Days, his Wound digested finely, and incarn'd as one could desire; but the Nineteenth Day, he complain'd of his Side more than usual, grew Faint, fell from his Stomach, and dyed the One and Twentieth Day after the Operation. As to his Wound and Belly, he never had any Uneasiness there, after the first Two or Three Days.

Upon

Upon opening him, we found the Bladder and Parts adjacent, free from any Inflammation, and the Wound incarn'd with the Muscles of the Belly: Upon removing the Intestines, which were all well, and free from any visible Indisposition; The right Kidney was found of a prodigious Size, and strangely indurated; The left Kidney wasted to nothing but its external Coat, and the Ureter distended so, as to admit the End of my little Finger: Upon Examining the right Kidney, I found it full of *fætid Pus*, and such a *Saburra* of Gritt, and other cretaceous Matter, that its Ureter was obstructed, and fill'd half way down with it. As the Case was so very extraordinary, I have given a Draught of it, after it was taken out of the Body, which will best explain the Difficulties, that obstructed our Cure.

I must say this however, that the lesser Operation in the old Way, wou'd have been perform'd with the greatest Ease in this Boy, and had the Advantage of any other Method; But such was the Unhappiness of his Constitution, he cou'd not have long survived the Cure any way.

These are the Cases material, that I have been concern'd in on this Head; the Difficulties that have occur'd in them, have given great Satisfaction to my private Thoughts on this Operation.

I shall adventure to offer some general Remarks on the whole.

In Persons where that *Materies sabulosa* abounds, the Kidneys are primarily affected, and continually afford fresh Supplies of that strophaceous Gritt, which make up the Composition of those soft rough Stones.

A *Stillicidium Urinæ*, is a certain Symptome of them;

They produce the utmost Pain, and are very irritating; this inflames, ulcerates, and thickens the Membranes; whereby the Bladder is prejudiced in its natural Excretion. And from thence by a *Colluvies* of this Matter with the *Lentor* and *Mucus* of those Parts, are form'd those Calculous Concretions, which by time gather to such a Quantity, as to receive its Shape and Figure from the contracted Bladder^a. The inward Structure of the Stones will best explain the Manner of their Accretion, therefore the Figures of several Sorts I have annexed.

How far the Observation above may be carried in Objection to *Rossetus's* Method, I shall not presume to say; yet every one knows, that depending Cavities, are the greatest Obstructions we meet with in our Practice; and I believe the Relapses of some nephritick Patients, after the Operation has succeeded, take their Rise from that *Saburra*, which must be collected even in the time of Cure.

And whether the Dilatation of the Sphincter, the depending Orifice &c. as in the old Ways, may not, in such Constitutions, have happier Effects let the impartial Artist consider.

Smooth Stones, that are loose, tumbling in the Bladder, receive their Shape and Accretion in another manner; and a Suppression of Urine for the most Part is their concomitant Symptome: In these Sorts of Stones, the high Operation may have the preference.

It may be objected, that there are some Accidents as Impotency, involuntary Emission of Urine, Fistula's &c.

^a Fernelius cap. xiii. de vesicæ morbis. Omnem calculum in vesica conclusum rudimentum quoddam e renibus traxisse, e quibus per nephriticum dolorem excidens si grandiusculus est, in vesica aliquandiu hæret, ac plerunque persistit, illicque allatarum fordium adhæsu coagmentatur, dum verus confirmatusque lapis fiat.

are Inconveniencies to which the lower Methods are liable; yet as these do not always follow, the immediate Safety of the Patient should be the sole View of the Surgeon, who ought not to pin himself down to one only Method. And I am apt to believe the several Inconveniencies that have attended the usual Methods have been owing to too strict an Attachment to the generally receiv'd Opinion, that Wounds in the membranous Part of the Bladder are mortal.

This was what tyed up the Hands of many Surgeons, from making their Incisions so far up, as Experience now, in this new Method, assures us we may with Safety.

Indeed I have observ'd, that in all those I have cut the lower Way, the larger my Incisions were, the more successful was the Operation and Cure.

And as to involuntary Emissions of Urine, in three Women, from whom I Extracted large Stones, one, which was by Dilatation only, had that Misfortune; To the other two, in whom the *Calculi* were bigger, I made Incision; by that means the Parts were less injured, and they became soon perfectly well.^a

This concludes what I have to offer on this Head. And as I have no other View but a general Good, the Fate of its Reception gives me the less Concern: The Narratives are purely Fact, and therefore will admit of no Dispute.

No other Motive cou'd have prevail'd on me to an Attempt of this Kind, but the Duty and Love I owe to my Profession.

^a Celsus p. 478. Ex quo & sanguinis profusio, & distensio nervorum fieri potest, quæ si quis evasit, multo tamen patientiorem fistulam habiturus est, ruptâ cervice. quam habuisset, incisa.

An Explanation of the Figures.

T A B L E I.

Fig. 1. is the Scheme as it was just taken out of the Body of the Boy mention'd in the last Observation.

- a. The Right Kidney open'd, representing the *Cellula* form'd by the Stones and cretaceous Matter lodg'd in them.
- b. The left Kidney, the Parenchyma wholly wasted.
- c. The left Ureter, of a very great and unusual Bigness
- d. The Bladder.
- e. Its Neck where the biggest End of the Stone lay.
- f. The Wound incarn'd to the Muscles of the Belly.
- g. The Urachus.

Fig. 2. 3. 4. are, a. b. The external Figures of the Stone taken from the Fellow of *Wells*.

c. Its inward Structure, a small *Nucleus* in a Bed of Gritt. The *Lamina* without that, of a more cretaceous Matter, to the external Surface, which was very rough and fabulous.

Fig. 5. 6. are the Figures of a Stone I extracted from a Boy cut the old Way, and only shewn to express the inside Structure.

T A B L E II.

Fig. 1. Is a side View of the foregoing Preparation when dry.

- a.* The right Kidney.
- b.* The Left, with its large Ureter.
- c.* The obstructed Ureter of the right Kidney.
- d.* The Bladder.
- e.* Its Curve made by the *Os Pubis*.
- f.* The Wound.
- g.* The Urachus.
- h.* The Stone it self in Miniature.

Fig. 2. are 27 of the 33 Stones taken from the old Gentleman, mention'd Page 16.

Fig. 3, 4, 5. Are 3 Stones taken from a young Lad, cut the old Way and cured.

- 6. Is the inside Structure of the biggest.
- 7. Represents the Thickness of the same, of a very smooth Surface.

Fig. 8. *a.* Is the external Figure and Size of that Stone mention'd Page 16, 17. that cou'd not be extracted.
b. c. Pieces broke off, in attempting to draw it out.

Fig. 9. Its internal Figure; a hard black Nucleus, a *Saburra* of Gritt round it, and without that, *Laminae* of a cretaceous Matter; it weigh'd 11 Ounces.

T A B L E III.

Fig. 1, 2. Are the internal and external Figures of a smooth Stone.

Fig. 3. 4. Are the same of a rough Stone, taken from a Person cured the old Way; The blackish Part in the inside Figure, is of a Chesnut colour, and is a Collection of small Pebbles, that carry a Coat like polish'd Marble.

Fig. 5. 6. 7. 8. Are the same of a Monstrous Stone taken from a Person of this City, that dyed of it.

a. b. Are the external Figures, the Excrescences of it are of a blackish Colour, very hard, but here and there beset with white Salts. It was of the exact Figure of the Bladder with its Neck.

c. d. Are the internal Figures of its Structure, those *Striae* or Rays in the middle of a Chesnut colour, polish'd like Marble.

Fig. 9. 10. Is the external and internal Figure of a very large Stone, its external Surface very smooth.

The inward Structure is a soft Calx in several *Laminae*, then a broad Circle of that hard polish'd Substance, of a Chesnut colour, which is again cas'd over with a cretaceous Matter in *Laminae* to the external Coat.

F I N I S.

Fig. 1.

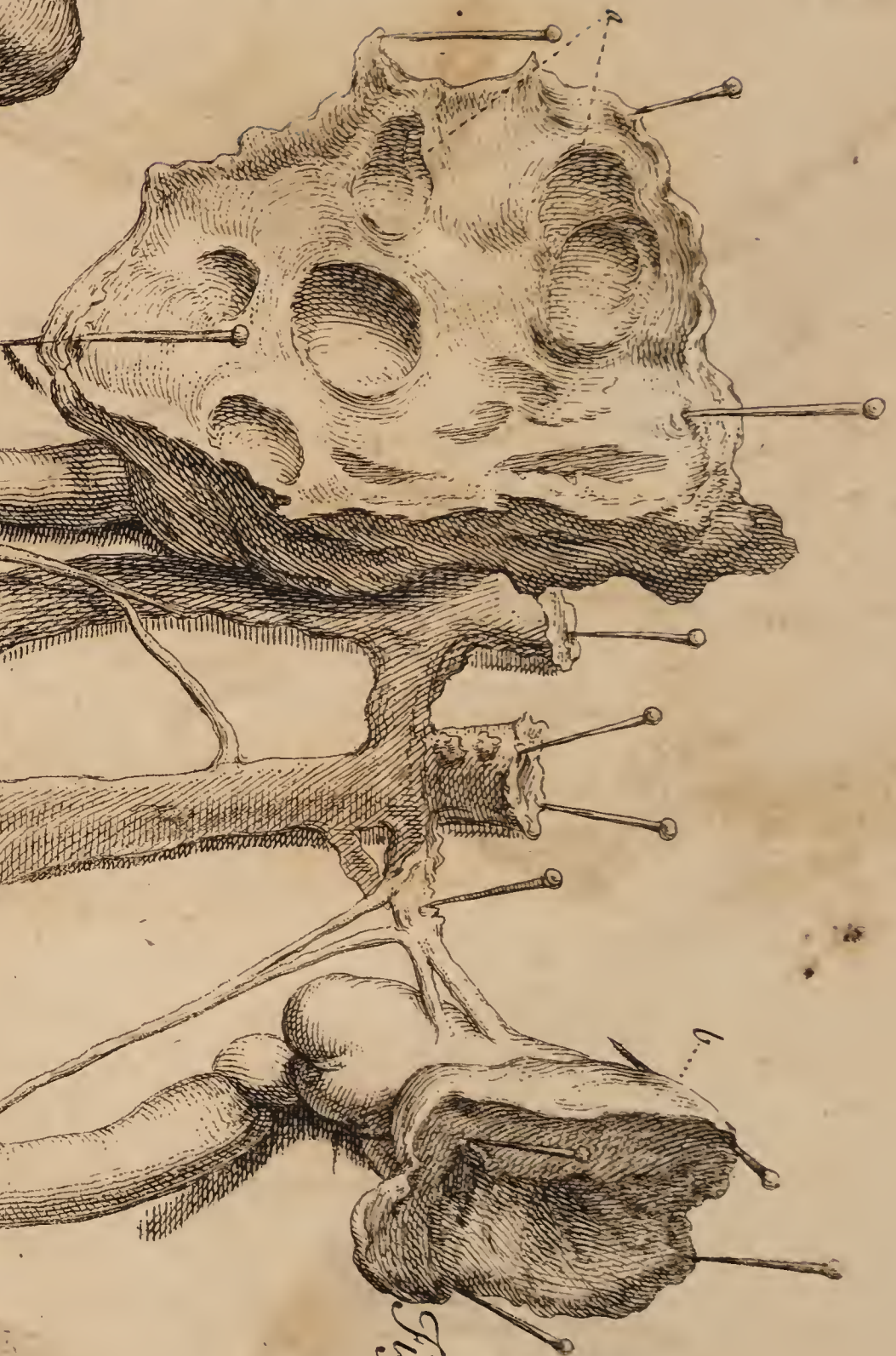


Fig. 5.

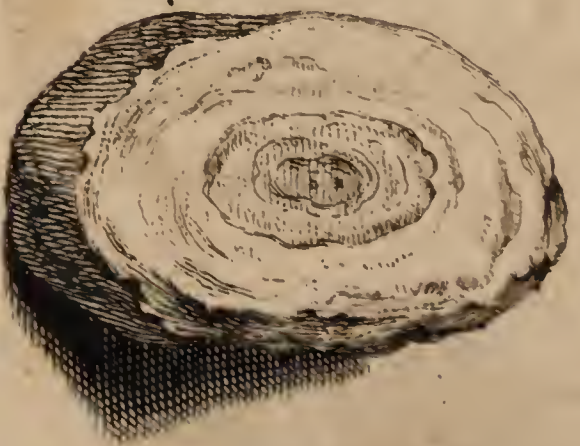


Fig. 6.



Fig. 2.



f

d

g

e



Fig. 3.



Fig. 4.

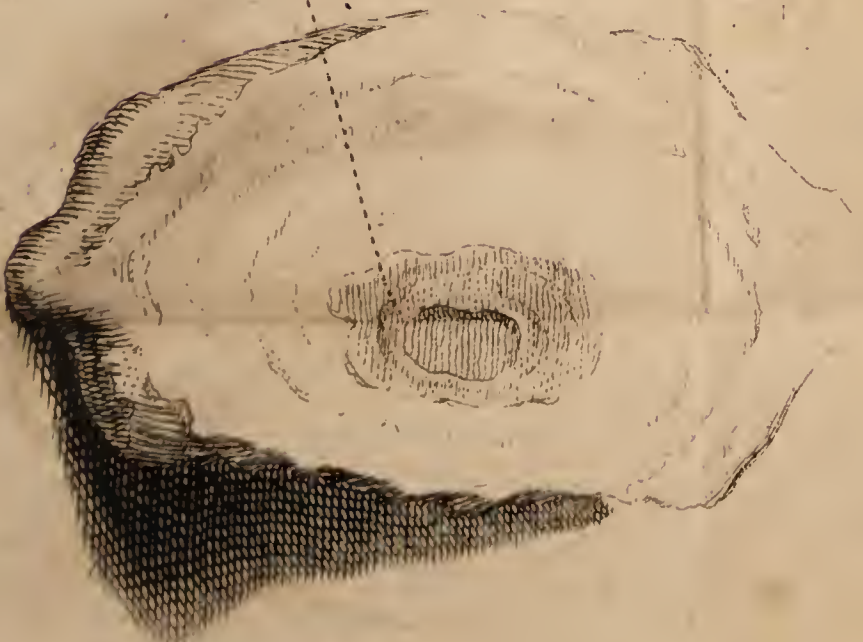




Fig. 2.

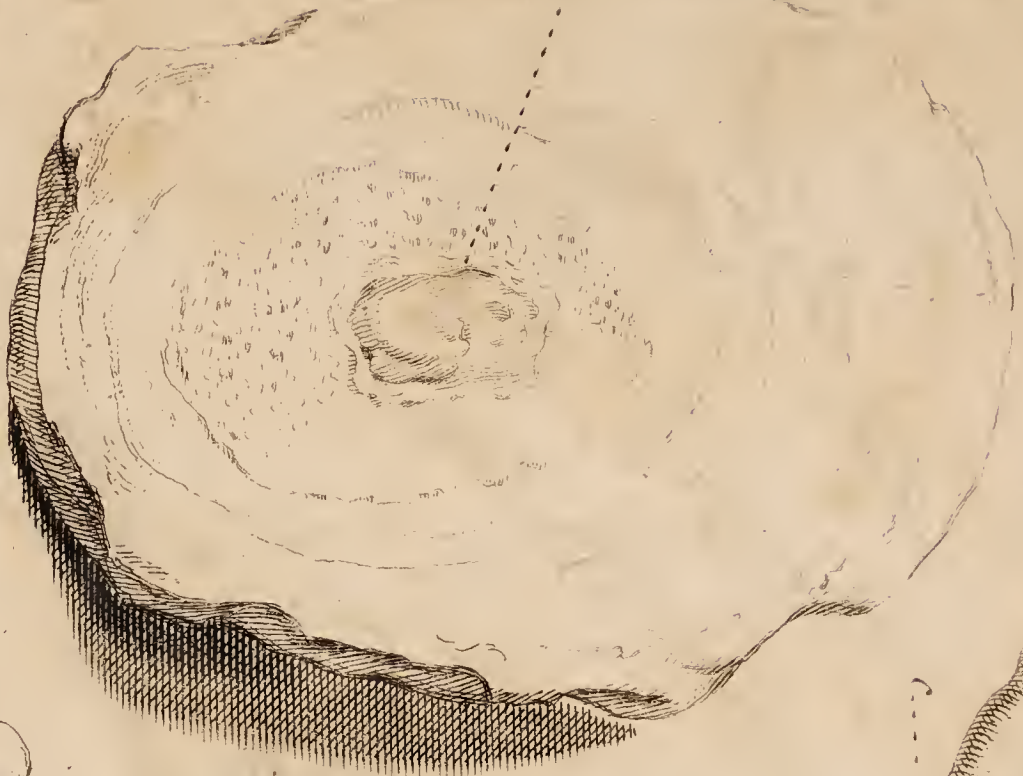


Fig. 4.



Fig. 5.

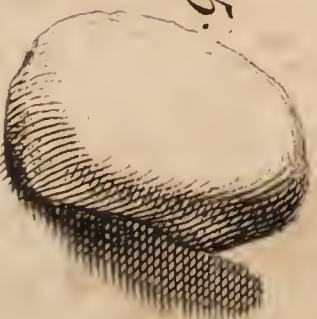
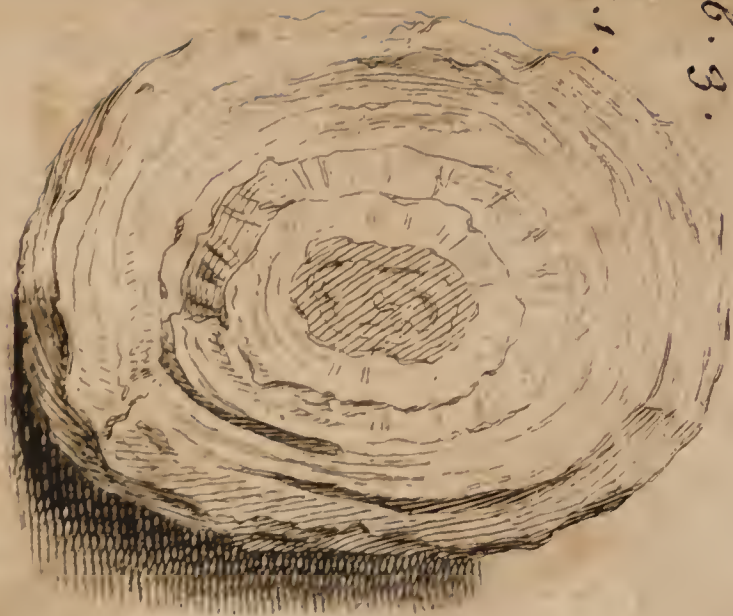


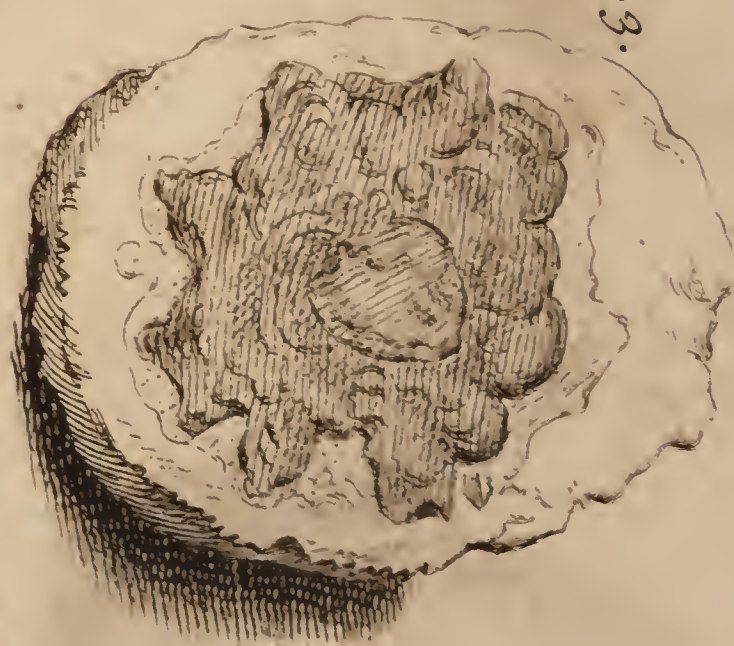
Fig. 1.



2.



Fig. 3.



4.



Fig. 9.



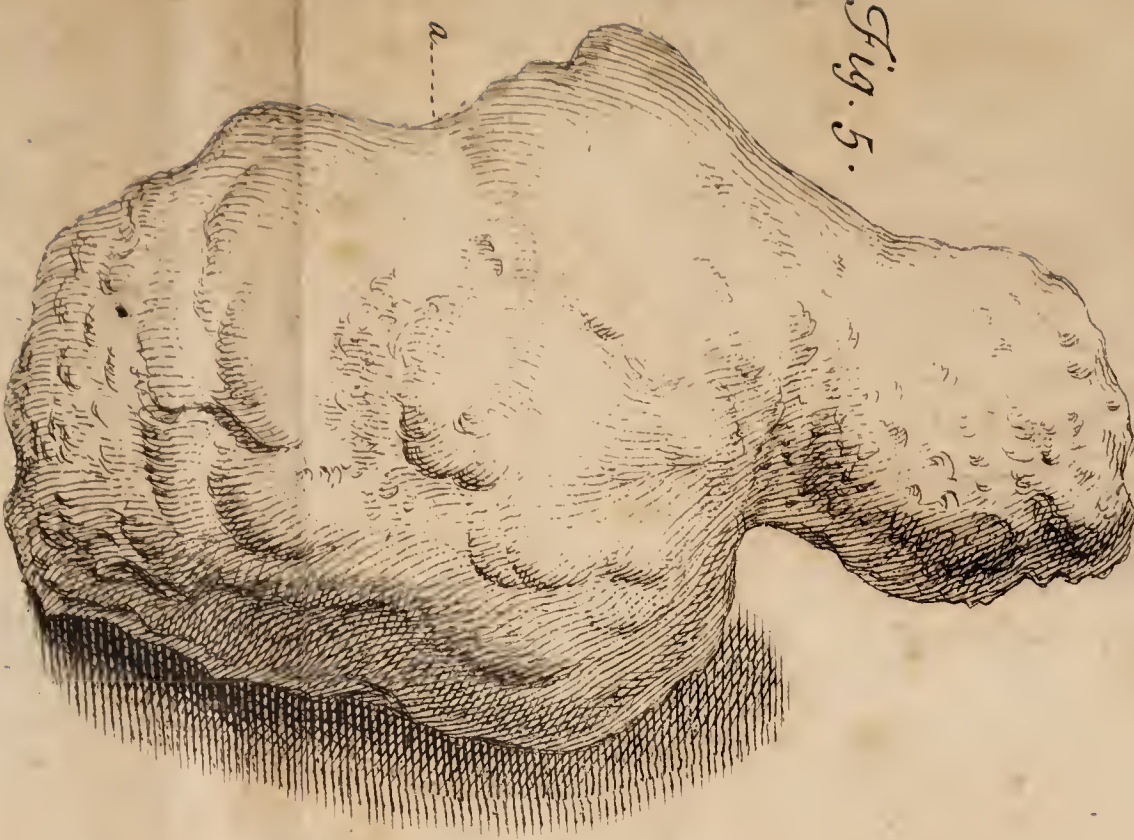
8.



7.



Fig. 5.



6.



Fig. 10.



